Analysis shows that the following rules may be used to correctly identify a transition from a given line segment of Figure 4 to an adjacent line segment to the right (calling for the output signal n of the post processor to be incremented), and a transition from a given line segment to an adjacent line segment to the left (calling for the output signal n of the post processor to be decremented):

$$\text{If } \overline{D} = 0 \text{ and } s(t)\uparrow, \; ++n;$$

$$\text{If } \overline{U} = 0 \text{ and } r(t)\uparrow, \; --n,$$

where the up-arrow symbol represents a rising transition.

The post processor may be realized using any of a variety of logic circuits that implement the foregoing rules. Examples of such circuits are shown in Figure 9 and Figure 10.

Referring to Figure 9, the signals $\overline{U}$ and $\overline{D}$ are logically ANDed together and the result is applied to the enable input of an up/down counter. The signal s(t) is applied to a UCLK input of the counter, and the signal r(t) is applied to a DCLK input of the counter. The output signal n of the counter is the output signal of the post processor 821. The logic gates 901 function to disable counting during normal operation.

Referring to Figure 10, the signals $\overline{U}$ and $\overline{D}$ are again logically ANDed together and the result is applied to the enable input of an up/down counter. In addition, the $\overline{U}$ signal is applied to a U/D input of the counter. The signal s(t) and the signal r(t) are logically ORed together, and the result is applied to a CLK input of the counter. The output signal n of the counter is the output signal of the post processor. The logic gates 1001 function to disable counting during normal operation.

Assuming a postprocessing circuit like that of Figure 10, the TSAD may be simplified as shown in Figure 11. In particular, in Figure 11, the multiplier of Figure 8 is replaced by circuitry 1130, including a multiplexer and an accumulator comprising an adder and a register R. In operation, increments of $2\pi K$ are added or